



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,297	09/25/2003	Willard E. Wood	11816.56USU1	4458
23552	7590	02/06/2006	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,297

Applicant(s)

WOOD ET AL.

Examiner

Olga Asinovsky

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 82-98 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-31 and 82-98 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on June 13, 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/24/2005

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

The provisional obviousness-type double patenting rejection of claims 16-31 and 81-98 over claims 1-65 of copending Application No. 11/023,288 having a Pub. No. US 2005/0131119 A1 to Wood et al is withdrawn, because the present application and Wood (Pub. No. US 2005/0131119 A1) share the same priority date December 10, 2002. The provisional obviousness-type double patenting rejection of claims 16-31 and 81-98 over claims 1-18 of copending Application No. 10/656,670 having a Pub. No. US 2005/0053784 A1 to Wood et al is withdrawn since the present application has a priority date and both applications owned by the same company.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16-31 and 82-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al U.S. Patent 5,882,565.

Applicants amend claims to substitute "modified" polyolefin into a "grafted" polyolefin.

The rejection is set forth at pages 7-9 of the office action mailed on 08/05/2005 and it is incorporated here by reference.

Response to Arguments

3. Applicant's arguments filed November 14, 2005 have been fully considered but they are not persuasive. The argument is that Wood'565 does not disclose a

Art Unit: 1711

cyclodextrin grafted on to polyolefin. In other words, Wood'565 does not disclose "grafted polyolefin resin comprising a polymethylene backbone having randomly substituted covalently bonded groups derived from a cyclodextrin compound." The claim language is not set that a cyclodextrin is unmodified cyclodextrin (see specification at page 3, line 26). And, the claims language is not set that a polyolefin is functionalized polyolefin with maleic anhydride prior to the reaction with cyclodextrin (present specification page 13, lines 7-9.) Also, the phrase "cyclodextrin compound" can include any cyclodextrin derivative including a compatible cyclodextrin in Wood'565. Therefore, the present statement "that backbone having randomly substituted covalently bonded groups derived from a cyclodextrin compound" is readable such that a backbone polymer is grafted with a compatible cyclodextrin in Wood' 565. In the present claim 30, the cyclodextrin compound has a substituent substantially on at least one -OH group, thus, a cyclodextrin can be modified prior to reaction with a polyolefin. In the independent claim 82 the grafted polyolefin resin comprises a cyclodextrin bonded to a backbone carbon of the polymer through a maleic acid residue" can be considered as modified=acylated cyclodextrin (compatible cyclodextrin) using the appropriate acid anhydride (Wood column 10, line 43) and after that bonded to a backbone carbon of the polymer through acid anhydride residue. The present claims disclose a composition=product by process, wherein a process comprises a blend of a polyolefin resin and a grafted polyolefin resin. Product by process is a product. There is no process step that unmodified cyclodextrin is grafted on to a functionalized polyolefin.

Art Unit: 1711

The Declaration of Dr. Harrison has been considered. The examiner agrees that a reaction of cyclodextrin with a grafted polyolefin (graft functionalized polyolefin in the present invention) and a reaction of a compatible cyclodextrin with a polyolefin are two different processes.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge. US 2005/0043482 A1 discloses a method comprising a step that a polyolefin is grafted with a maleic anhydride and after that a grafted microfine polymer powder is reacting with a cyclodextrin to form a cyclodextrin-attached grafted polymer (claim 17 at page 6). The drawings are not readable.

Art Unit: 1711

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.A.
January 25, 2006



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700